

REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 8, 10-23 and 25-27 are now present in the application. No claims have been amended in this Reply. Claims 8, 14 and 19 are independent. Reconsideration of this application is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102

Claims 8, 10-23 and 25-27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Amou, U.S. Patent No. 5,957,659. This rejection is respectfully traversed.

Independent claim 8 recites a combination of elements including "a centrifugal fan including a rotary shaft, a motor and a plurality of blades; a heat sink, including a plurality of first cooling fins and a plurality of second cooling fins located at the same plane as the first cooling fins, wherein an annular cavity is defined between the first cooling fins and the second cooling fins, and the second cooling fins include a lower portion; and a cover formed on the heat sink and the centrifugal fan; wherein the motor for driving the rotary shaft is mounted below the cover and away from the heat sink, the blades are located in the cavity, and there is a distance between the rotary shaft and the second cooling fins so that the entire rotary shaft is located above the lower portion of the second cooling fins, and the rotary shaft is positioned away from the lower portion of the second cooling fins."

Independent claim 14 recites a combination of elements including "a heat sink, including a plurality of first cooling fins and a plurality of second cooling fins located at the same plane as the first cooling fins, wherein a cavity is defined between the first cooling fins and the second

cooling fins, and the second cooling fins include a lower portion; a cover connected to the heat sink and having corners directly contacted to the first cooling fins; and a centrifugal fan including a rotary shaft, a motor and a plurality of blades, wherein the motor for driving the rotary shaft is mounted below the cover and away from the heat sink, the blades are located in the cavity, the entire rotary shaft is located above the lower portion of the second cooling fins, and the rotary shaft is positioned toward the cover to be away from the lower portion of the second cooling fins.”

Independent claim 19 recites a combination of elements including “a heat sink, including a plurality of first cooling fins and a plurality of second cooling fins located at the same plane as the first cooling fins, wherein a cavity is defined between the first cooling fins and the second cooling fins, and the second cooling fins include a lower portion; a centrifugal fan having an axial direction and a radial direction and including a rotary shaft, a motor and a plurality of blades; and a cover, including a plurality of inlets, mounted onto said heat sink and said centrifugal fan, wherein air from ambient is flowed in the axial direction of the centrifugal fan into the heat sink from the inlets of the cover, and is flowed in the radial directions of the centrifugal fan and out of the heat sink; wherein the motor for driving the rotary shaft is mounted below the cover and away from the heat sink, the blades are located in the cavity, and there is a distance between the rotary shaft and the second cooling fins so that the entire rotary shaft is located above the lower portion of the second cooling fins, and the rotary shaft is positioned away from the lower portion of the second cooling fins.”

Applicants respectfully submit that the above combinations of elements as set forth in independent claims 8, 14 and 19 is not disclosed nor suggested by the reference relied on by the Examiner.

In particular, Amou in FIG. 7 discloses an axial fan disposed on a heat sink 301. The heat sink 301 has a base 302 and a plurality of fins 303, and the circumference of the fins 303 provided in the central portion of the base 302 is lower than that of the fins 303 provided in the peripheral portion thereof. However, as shown in FIG. 6 of Amou, the fins 303 are arranged in arrays. As a result, an annular cavity does not exist between the fins 303. Therefore, the blades 306 of the fan are not located in the non-existing annular cavity. Accordingly, Amou fails to teach "*an annular cavity is defined between the first cooling fins and the second cooling fins*" and "*the blades are located in the cavity*" as recited in claim 8.

In addition, Amou in FIG. 2 discloses an outer frame 26 fixed to the heat sink 17. As shown in FIG. 2 of Amou, the heat sink 17 comprises fins 19, and the outer frame 26 is disposed on the fins 19. As shown in FIG. 7 of Amou, the corner of the frame is rest on a post, not on the fin 303 (see also the cutting position B' of the section line A'-B' in FIG. 6). Therefore, Amou also fails to teach "*a cover connected to the heat sink and having *corners* directly contacted to the first cooling fins*" as recited in claim 14.

Furthermore, the fan in Amou is an axial fan, not a *centrifugal fan*. In addition, the shaft 12 of Amou is above the central portion 23 of the heat sink 17. As shown in FIG. 2 of Amou, the central portion 23 of the heat sink 17 is thicker than its peripheral base. Moreover, as shown in FIG. 7 of Amou, the shaft is above the fins located in the center portion of the base 302. The fins 303 in the center portion are even in height and do not comprise any lower portion to receive

the shaft. Therefore, Amou fails to teach "*a centrifugal fan*" and "the entire rotary shaft is located above *the lower portion of the second cooling fins*" as recited in claims 8, 14 and 19.

Since Amou fails to teach each and every limitation of independent claims 8, 14 and 19, Applicants respectfully submit that claims 8, 14 and 19 and their dependent claims (at least due to their dependency) clearly define over the teachings of Amou. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 102 are respectfully requested.

CONCLUSION

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Cheng-Kang (Greg) Hsu, Registration No. 61,007 at (703) 205-8000 in the Washington, D.C. area.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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